Part 15 Coalition Attendees at April 11, 2013 FCC Meetings

Elizabeth Bowles, President of WISPA

Dean Brenner, VP of Government Relations, Qualcomm

Joe Burton, CTO, Plantronics

Stan Ciszewski, Policy Committee Chairman, E-Z Pass Group

Steve Coran, Counsel for WISPA

Russ Ehrlich, Pepco Holdings

Michael Fitzpatrick, Senior Counsel, GE

Henry Goldberg, Counsel for the Part 15 Coalition

Joe Hanna, Directions (public safety consultant to the Part 15 Coalition)

Mark Jarman, President of Inovonics Wireless Corporation

Brett Kilbourne, Utilities Telecom Council

Rich Pickard, VP Legal and General Counsel, Plantronics

PJ Wilkins, Executive Director, E-Z Pass Group

Part 15 Coalition Members

Alarm Industry Communications Committee

American Petroleum Institute

Association of American Railroads

Elster Solutions

FreeWave Technologies, Inc.

GE Digital Energy

Inovonics Wireless Corporation

Intelleflex Corporation

Itron, Inc.

Landi+Gyr Company

MJ Lynch & Associates LLC

Notor Research

Plantronics

Qualcomm Incorporated

Silver Spring Networks

Starkey Laboratories, Inc.

Utilities Telecom Council

Wireless Internet Service Providers Association

Part 15 Coalition Supporters

Cisco

E-Z Pass Group

Google Inc.

IEEE 802.11

Kapsch TrafficCom IVHS, Inc.

Microsoft Corporation

New America Foundation

Public Knowledge

January 11, 2013

The Honorable Julius Genachowski
Chairman
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Opposition to Progeny Waiver Request
FCC WT Docket No. 11-49

Dear Chairman Genachowski:

The undersigned urge you to reject the proposal of Progeny LMS, LLC ("Progeny") to use the 902-928 MHz band (the "Unlicensed Band") for licensed high-power transmitters, which will interfere with millions of lower-powered unlicensed industrial and consumer devices already operating in that band. Field testing has proved conclusively that Progeny will disrupt a substantial number of unlicensed devices that consumers and businesses use every day.

In December 2011, the FCC granted Progeny waivers of two Part 90 rules. As required by the rules, the FCC directed Progeny to test its higher-powered equipment and to ensure that its operations did not cause "unacceptable levels of interference" to unlicensed devices. The test reports filed with the FCC show that Progeny has not met this condition of its waiver.

Much is at stake. The operations of millions of unlicensed devices – all manufactured, purchased, installed, and used in reliance on the FCC's existing rules before Progeny received the waiver – will be placed at risk.

Allowing Progeny to operate as proposed would adversely impact preexisting uses essential to public safety and critical infrastructure, and undermine important public policy initiatives – including rural broadband connectivity and the President's Plan for a 21st Century Electric Grid. For instance, low-powered devices currently operating in the Unlicensed Band include:

- Medical devices such as wireless glucose meters and insulin pumps;
- Important freight railroad applications, including wireless links for signaling systems, wireless download of train event recorders, and Automatic Equipment Identification (AEI), which tracks equipment and cargo;
- Smart meters and appliances;
- Supervisory Control and Data Acquisition ("SCADA") systems that monitor and control the safety and integrity of oil and natural gas pipelines and production fields;
- Water and gas utility measurement devices;
- Radio Frequency Identification Devices ("RFIDs") that automatically track assets and supply chains;

- Fixed broadband service in rural areas that is available to thousands of consumers only through the use of the 902-928 MHz unlicensed band due to the superior propagation characteristics in this band that enable signals to penetrate trees and terrain obstructions; and
- Countless other important applications for utilities, oil and natural gas companies, railroads, and other critical infrastructure companies as well as public safety and health services.

Moreover, millions of American consumers rely on unlicensed devices in this band for everyday uses, including wireless hearing aid products, emergency call pendants, home alarm systems, cordless phones and wireless headsets, and a host of other popular consumer items. The impact on the U.S. economy of unacceptable interference to these ubiquitous and important devices is immeasurable.

Reducing the amount of usable unlicensed spectrum would contravene public policy at a time when consumers and businesses require more and more unlicensed bandwidth for education, public safety, teleworking and other important applications. As you know, the FCC's National Broadband Plan found that technologically flexible access to unlicensed frequencies is an essential innovation policy that the FCC should foster. You recently testified before the House Committee on Energy and Commerce Subcommittee on Communications and Technology that unlicensed spectrum has an established record of creating hundreds of billions of dollars of value for our economy and consumers. And, FCC Commissioner Mignon Clyburn testified at the same hearing that unlicensed spectrum generates up to an estimated 37 billion dollars each year for the U.S. economy.

The record is clear. Progeny has done nothing to protect users of unlicensed devices, and repeatedly has requested rule concessions that threaten the established and growing Unlicensed Band, a national resource that quite simply cannot be placed at risk. We urge you to withhold permission for Progeny to commence commercial operations until the potential for unacceptable interference to the users of the Unlicensed Band is eliminated.

Sincerely,

[Signatories On Following Pages]

cc: The Honorable Robert M. McDowell, Commissioner
The Honorable Mignon L. Clyburn, Commissioner
The Honorable Jessica Rosenworcel, Commissioner
The Honorable Ajit Pai, Commissioner

SIGNATORIES

American Gas Association

American Petroleum Institute

American Public Power Association

American Water Works Association

Association of American Railroads

Demand Response and Smart Grid Coalition

Edison Electric Institute

Energy Telecommunications and Electrical Association

GridWise Alliance

Large Public Power Council

National Association of Manufacturers

National Electrical Manufacturers Association

National Rural Electric Cooperative Association

New America Foundation

Public Knowledge

Utilities Telecom Council

Wireless Internet Service Providers Association

Alloynet Wireless Technologies, Inc.

Airspan Networks, Inc.

ARC Wireless LLC

Anadarko Petroleum Corporation

Cambium Networks Ltd.

Black Hills Energy

Colquitt Electric Membership Corporation

Cielo Systems International

Dairyland Power Cooperative

Convergence Technologies, Inc.

Exelon Corp.

Elster Solutions

FreeWave Technologies, Inc.

FirstEnergy Corp.

Great River Energy

The General Electric Company

Holy Cross Energy

Green Mountain Power Corporation

Intelleflex Corporation

Inovonics Wireless Corporation

Itron, Inc.

Invictus Networks, LLC

Link Technologies, Inc.

Kinder Morgan, Inc.

MJ Lynch & Associates LLC

Mid-Kansas Electric Company, LLC

New America Foundation

Motorola Solutions, Inc.

Notor Research

Northeast Utilities

Pepco Holdings, Inc.

PDMNet, Inc.

Plantronics, Inc.

Schneider Electric SA

Siemens Corporation

Southern Star Central Gas Pipeline, Inc.

Starkey Laboratories, Inc.

Streakwave Wireless, Inc.

Sunflower Electric Power Corporation

Trango Systems, Inc.

Tyco

Ubiquiti Networks, Inc.

Village of Mt. Prospect, IL

Williams Northwest Pipeline, GP

WISP-Router, Inc.

WLAN Mall

WISPA®
Wireless Internet Service Providers Association

Progeny's Unacceptable Interference to the 902-928 MHz Band

April 11, 2013

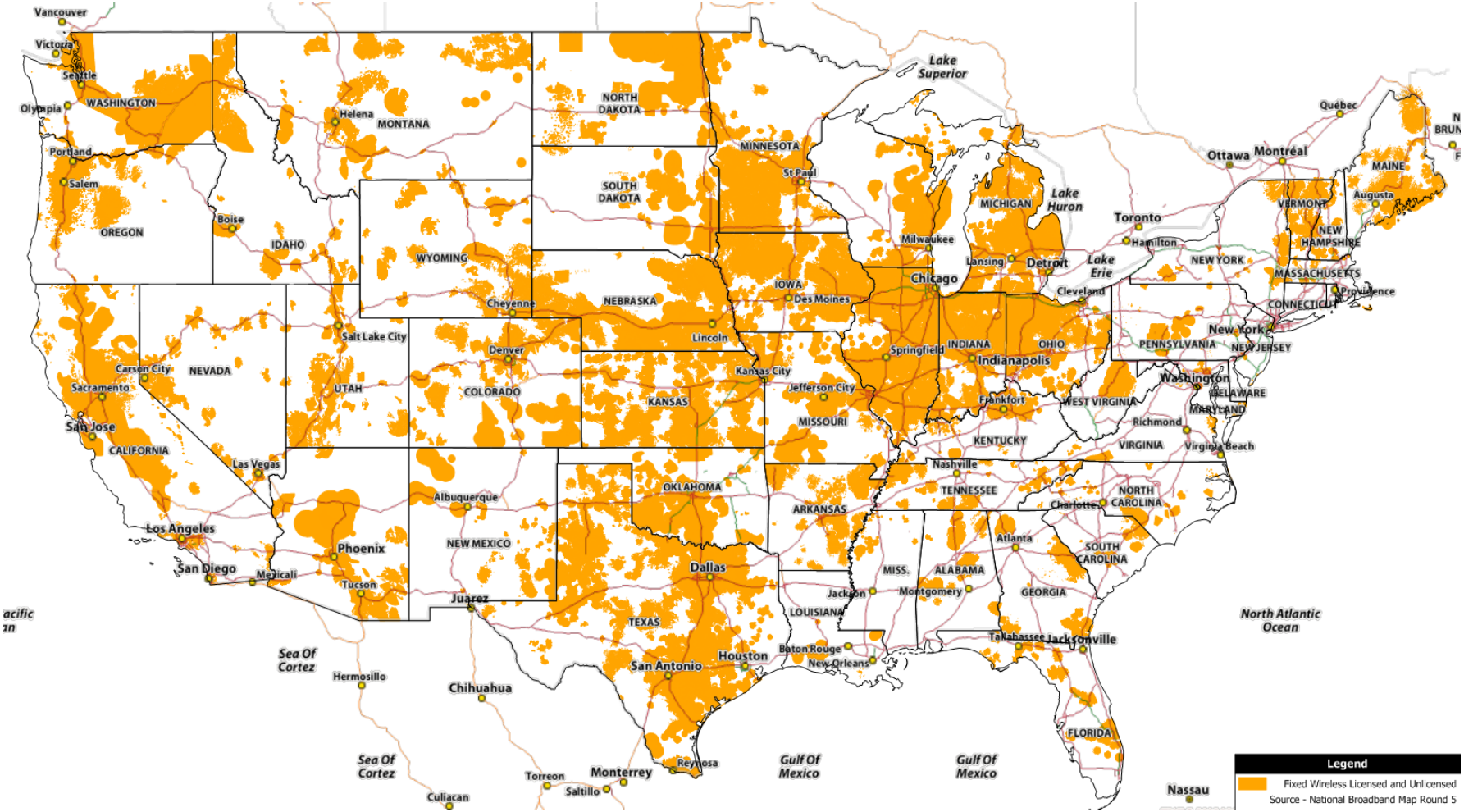
WISPA®
Wireless Internet Service Providers Association

Who is WISPA

- The trade association for wireless Internet service providers
  - 700 members
  - Provide cost-efficient service to areas that cannot be economically reached by wireline platforms
  - Rely on Part 15 unlicensed spectrum in the 900 MHz, 2.4 GHz and 5 GHz bands, “lightly licensed” spectrum in the 3.65 GHz band and licensed spectrum primarily for backhaul
  - Active participant in FCC proceedings involving spectrum and CAF reform

WISPA®
Wireless Internet Service Providers Association

Where WISPs Are



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Wireless Internet Service Providers Association

Why 900 MHz is Important

- The only unlicensed non-line-of-sight band
- Existing Part 15 users have been successfully sharing the band for 20 years
  - Broadband, smart grids, consumer devices, etc.
- Heavily used by WISPs in areas with trees, hills and other obstructions that may never be reached by wireline broadband or affordable wireless broadband services

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Wireless Internet Service Providers Association

Progeny-WISPA Joint Test Results Throughput Reduction Percentages

Equipment	Test Set #	WISP Equipment Channel (MHz)	Progeny Frequency (MHz) Block(s)	% Throughput Reduction /w Progeny Network "ON"
Cambium Canopy M9000 AP and M9000 SMC (SM on hill; AP on valley floor; both horizontal polarization)	1 DL 1 UP	902-910 (Outside Progeny B and C Blocks)	919-921 (B-Block) 925-927 (C-Block)	AP to SM – 0.5% SM to AP – None Overall = 0.5%
	2 DL 2 UP	916-924 (Overlaps Progeny B Block)	919-921 (B-Block) 925-927 (C-Block)	AP to SM – 14.9% SM to AP – 8.3% Overall = **23.2%**
	3 DL 3 UP	919-927 (Overlaps Progeny B and C Blocks)	919-921 (B-Block) 925-927 (C-Block)	AP to SM – 49% SM to AP – 13.2% Overall = **62.2%**
Ubiquiti Rocket M900S AP and CPE (AP on hill; CPE on valley floor; dual H and V polarization)	4 DL 4 UP	902-912 (Outside Progeny B and C Blocks)	919-921 (B-Block) 925-927 (C-Block)	AP to CPE – (+) 2% CPE to AP – 2.3% Overall = 0.2%
	5 DL 5 UP	912-922 (Overlaps Progeny B Block)	919-921 (B-Block) 925-927 (C-Block)	AP to CPE – 47.9% CPE to AP – 41.5% Overall = **89.4%**
	6 DL 6 UP	917-927 (Overlaps Progeny B and C Blocks)	919-921 (B-Block) 925-927 (C-Block)	AP to CPE – 2.5% CPE to AP – 17.6% Overall = **20.1%**

No reduction

No reduction

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What it Means

- Drastic reductions in throughput result in substantial and unacceptable degradation in consumer and business access to fixed broadband services
  - Slower service
  - Service eliminated
- Unserved and rural areas will wait much longer for services

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Consequences

- Authorizing Progeny for commercial operations would set a precedent that *all* unlicensed bands could face severe service disruptions from licensed operations
  - The “unacceptable levels of interference” condition will be a meaningless phrase that provides no assurance to millions of current and future unlicensed users
- Authorization will permanently damage the very vibrant, highly developed unlicensed infrastructure
  - Will reduce confidence in the regulatory structure
  - Will upset the balance between licensed and unlicensed spectrum

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E-ZPASS BRIEFING FOR THE FCC IN THE PROGENY MATTER

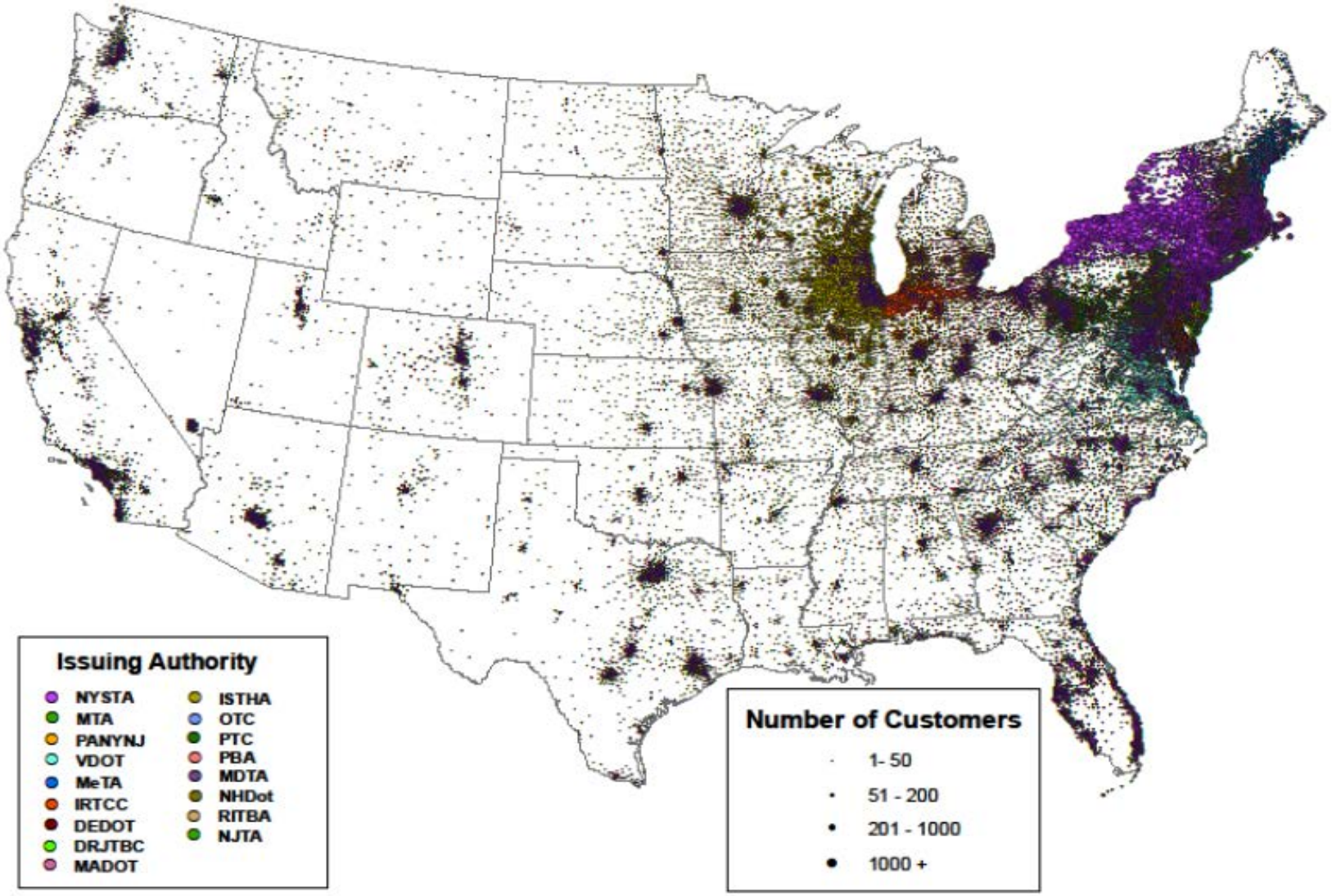
April 11, 2013

PJ Wilkins
Executive Director
302-577-1333

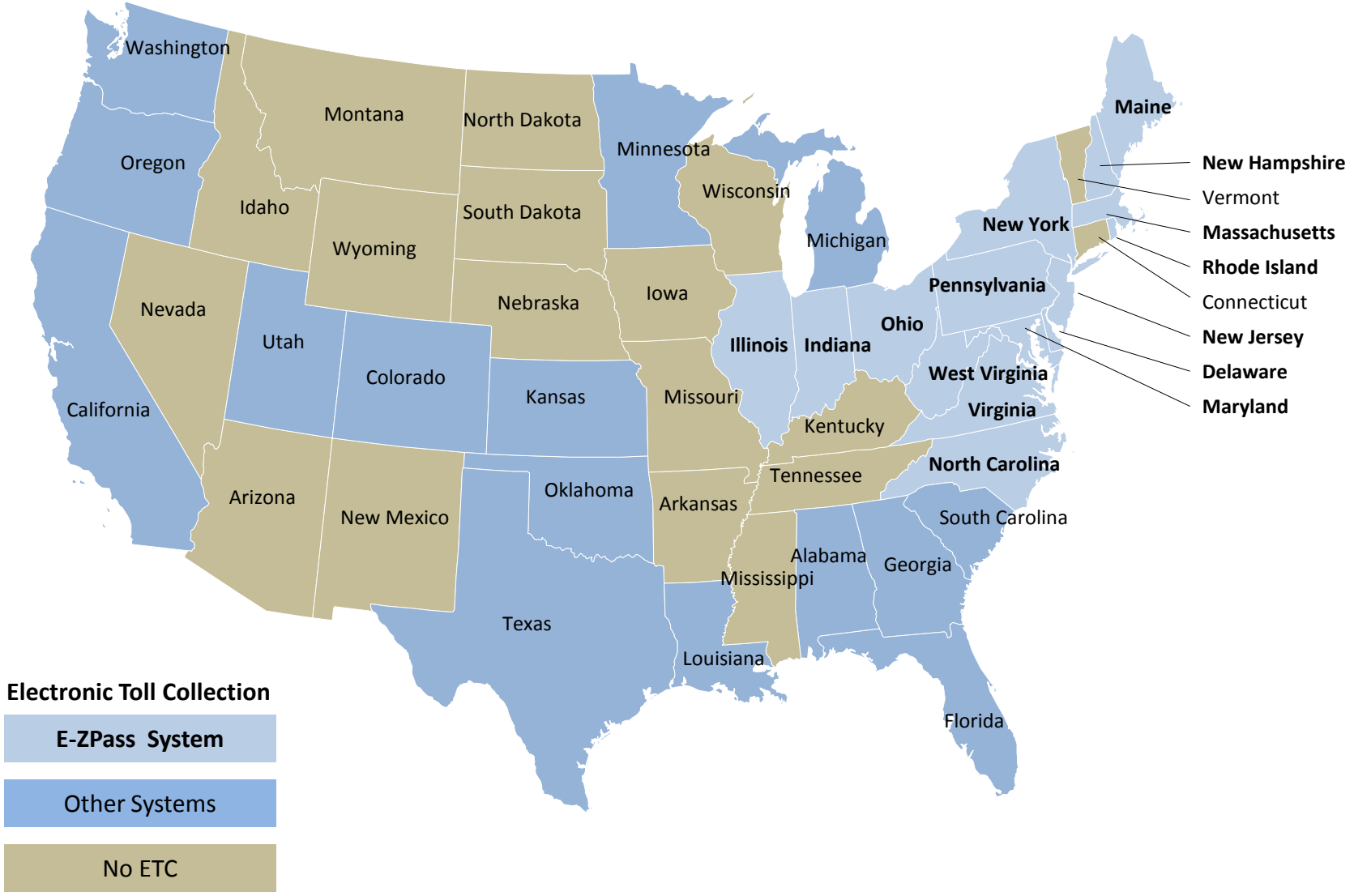
E-ZPASS GROUP

- World's largest interoperable toll collection system, operating in 15 states
- 25 million Part 15 devices deployed to customers in all 50 states and beyond
- Collects almost $7 billion in annual revenue from 2.5 billion transactions – larger impact nationally – 75% of all tolls are electronic
- Operates with very high levels of accuracy and proven customer satisfaction

E-ZPass Customer Distribution by Issuing Authority



Electronic Toll Collection in the United States



E-ZPASS

- More than a billion dollars of infrastructure in place, consisting of roadside units and 25 million in-vehicle devices
- System transactions occur in milliseconds at highway speeds, at over 99.9% accuracy
- Extensive effort underway to comply with MAP21 legislation for nationwide interoperability. The 915 band is the only technology available to meet the requirements.

CONCERNS ABOUT INTERFERENCE

- Safety will be impacted by interference with our equipment; erroneous feedback
- Will be a substantial risk to our operations
- Will hamper the free flow of traffic through our facilities
- Functionality may be lost – gates inoperative, causing massive delay and congestion
- TRANSMIT Traffic Management system may be negatively impacted
- Insufficient data presented to assure compatibility with our deployed system

WHAT ARE WE ASKING FOR?

- Progeny to conduct additional testing to ensure the E-ZPass system is not negatively impacted
  - No safety concerns with the traveling public
  - No degradation of our equipment
  - No reduction in system performance